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COORDINATED COTTON RESEARCH PROGRAM

A radio summary (including a brief interview with H. W. Barre, Bureau of Plant Industry) by M. S. Eisenhower, Director of Information, broadcast Tuesday, April 23, in the Department of Agriculture period, National Farm and Home Hour.

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SALISBURY:

We have back with us today, Mr. M. S. Eisenhower, Director of Information, for the second in his Tuesday series of broadcasts on scientific work of the Department. Today he will report on an important new development in cotton research.

About a year ago, Secretary Wallace appointed a department committee to study all research affecting the cotton industry - the central purpose being to bring about improvement in the efficiency of production, marketing, and utilization of cotton. The committee recently prepared its report on a coordinated cotton-research program. We can't present to you today all the men who helped prepare this report. But we have asked one member of the group to be interviewed on certain phases of the program. He will be presented by Mr. Eisenhower. Mr. Eisenhower --

EISENHOWER:

Thanks, Morse - and hello, everyone.

A successful cotton farmer - or any other kind of farmer, for that matter checks up every now and then to see just where he stands, where his weak points are, and how he can improve his business. With those facts as a basis, he maps out a program for his farm.

Following in research this tested farm procedure, the Department of Agriculture and the agricultural colleges of the South have recently taken stock of all of their research work on cotton. This critical study shows what facts are needed to deal with major problems of the industry.

This new blueprint of cotton research will enable everybody to work toward a common goal - improvement of the cotton industry.

Today we will try to give you the highlights of the eight main lines of research in this new program; they extend from the improvement of seed stock to the creation of satisfied customers for cotton products.

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To describe the research program for finding facts to cut the cost of producing cotton, I want to introduce a new member of the Department of Agriculture. He heads up the cotton work of the Bureau of Plant Industry, and is well known to folks throughout the South. Mr. H. W. Barre, formerly director of the South Carolina Agricultural Experiment Station. Mr. Barre --

BARRE:

Thank you, Mr. Eisenhower - and good afternoon, Farm and Home Hour listeners. I send a special greeting to my friends in the cotton country.

EISENHOWER:

Now, of course, Mr. Barre, the cotton surplus has brought forth new problems and intensified others throughout the cotton industry. The Adjustment Administration is working constantly on that problem and is keeping the radio audience informed of all its actions. So let's confine ourselves to problems other than adjustments. First, what would you say are the main production problems of the cotton farmer today, from the research standpoint?

BARRE:

Quality and low-cost production. Those are the cotton farmer's two biggest production problems. Scientists in the Department and the State stations are trying to find facts that farmers can use in solving those problems.

Cotton spinners here and abroad have become quality-conscious. They want a certain type and length of cotton for a particular textile. Doctor Webb, and his co-workers in the Bureau of Agricultural Economics, have found many new facts about specific fiber properties. Their tests give us a clear picture of some of the qualities of different types of cotton. Doctor Stanley, and the textile workers in the Bureau of Home Economics, are finding what kind of cotton makes the best sheets, shirts, dresses, or other products. Knowing the kind of cotton the textile industry and the consumer want, farmers and scientists can improve present varieties, and breed new ones, to meet those demands; these suitable varieties will create satisfied cotton customers, the very foundation of the cotton industry.

EISENHOWER:

You say you are breeding high-quality cotton stock for the farmer. I wonder if you will give us a word on your line of attack?

BARRE:

Well, in brief, we are producing high-quality foundation stock for one-variety communities. Note that I say for one-variety communities. When you succeed in producing a cotton with highly uniform fiber length, or a fine, strong fiber, why mix it with a hundred and one other varieties? The only practical way to maintain a superior variety of cotton is to plant only one variety of



cotton to a community. So, naturally, research people work very closely with the extension people who help farmers organize to grow one variety only - and that one a good variety - in a community. Dozens of communities throughout the South already are on a one-variety basis.

EISENHOWER:

Well, probably most people appreciate the importance of maintaining good, pure foundation stocks, whether in plants or animals.

BARRE:

Yes, you're right. But - and this is where we run into a big problem - we don't know just how much of cotton quality is due to heredity, and how much to other factors. The length of the cotton fiber may depend not only on the plant's heredity, but also on the amount of rain in a particular growing season. The fibers from different bolls on the same stalk of cotton may differ greatly in length, largely because part of the fibers were produced in a dry season, and part in a wet season. Climate, and soils, and many other factors also affect quality. We are now testing 16 different kinds of cotton at more than a dozen points across the Cotton Belt as part of our program to find out just where the influence of heredity leaves off and that of growing conditions begins. I think this work will show us some short-cuts to cotton improvement.

EISENHOWER:

All right, you are aiming first for quality cotton. Now, a moment ago, you said the cotton farmer also must produce at a low cost in order to meet competition. Certainly, insect damage has a lot to do with cost of production. If the weevil destroys half or three-fourths of a man's cotton crop, it runs up his costs - sometimes to the point of bankrupting him. I know insect problems are a little out of your field. But, as long as we are talking about production problems, I wonder if you would give us a few of the highlights of the insect control work.

BARRE:

Mr. R. W. Harned, of the Bureau of Entomology and Plant Quarantine, has reported on several important pieces of work that the entomologists are carrying on. For example, they have sure evidence, from some work started in Texas three years ago, that insects spread certain diseases of cotton. But they aren't ready to talk too much yet until they get more information on this subject.

The entomologists also are experimenting with parasites to destroy harmful cotton insects.

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EISENHOWER:

If one insect will kill off another, it will save the cotton farmers a lot of work and money.

BARRE:

Yes. As the boll weevil moved across the Cotton Belt years ago, parasites that had been living off of other insects adapted themselves to the boll weevil. The entomologists are trying to find ways to increase the numbers and usefulness of the weevil's natural enemies.

They also are pushing right ahead to develop still more effective weevil-killing chemical sprays and dusts. Other Divisions of the Bureau of Entomology and Plant Quarantine have helped cotton growers by protecting American cotton from serious pests that occur in other countries. The pink bollworm is the most serious of all, but by means of quarantine and eradication measures, it has been kept out of the main cotton belt of the United States.

EISENHOWER:

That gives us a pretty good idea of the cotton insect investigations and control. Now, I wonder if you would review some of the other major lines of work to cut the cost of production and to help stabilize supplies?

BARRE:

Well, of course, the research folk are gathering facts on how to control diseases. The Texas root rot, the wilts, seedling diseases, and some of the boll rots cause heavy losses. They run up costs and wipe out profits for the individual farmer. Effective control methods will help the cotton farmer get a better and more regular return from his crop.

Since high yields per acre are essential to low-cost production, the Department and college men also are doing a great deal of work on soils and fertility problems, including the influence of winter cover crops and crop rotations. They also are trying to find the most economical fertilizer practice for the various types of soil. Then the farm engineers and soils men are trying to find the best ways to place the fertilizer in the cotton row, and to develop improved fertilizer machinery.

The engineers are working on several other important projects, including machinery to plant the cotton seed at different depths in the row. By planting seed at different depths, the farmer has a better chance to get a good stand of cotton, no matter whether the season is wet and cold, or warm and dry.

All of those various production studies - studies to produce improved varieties, to control diseases and insects, to develop improved fertility and cultural practices - tie into still another important project. The Bureau of Agricultural Economics, the State experiment stations, and several other groups



are mapping out the various type-of-farming regions in the South, and drawing up a picture of probable changes in farming in those regions as a result of the program to adjust acreage. These studies will give all of us in the research field some definite guides to follow in developing the most profitable farm program for men in each of the main farming sections of the South.

EISENHOWER:

Well, thank you very much, Mr. Barre, for your fine summary of the research program on cotton production problems.

Mr. Barre has summarized for us, research plans to help farmers produce cotton of better quality at low cost. Now, the cotton farmer's interest in his crop extends beyond production.

After the farmer picks his cotton, the next step - and this is the second major line of work in the cotton research program - is ginning and preparation for market. Trash - leaf and dirt - due to careless picking lowers the quality of ginned lint.

Poor ginning itself can very easily spoil high-quality cotton. Of course, several things cause poor ginning. The ginner may try to run through too many bales in a day. But, by and large, ginning the cotton when it is too wet damages more cotton than almost any other practice. This is largely the farmer's responsibility. The farmer picks his cotton wet, and hauls it to the gin wet; the ginner almost has to gin the cotton the way the farmer brings it to him. But Mr. McCrory, and the men of the Bureau of Agricultural Engineering, report some encouraging results with cotton drying equipment at their experimental gin at Stoneville, Mississippi. Ginners are rapidly adopting this equipment.

After the cotton comes from the gin, the next question is, "What about the quality of this cotton?" So the next important step is fiber analysis. With the use of X-rays, and other scientific instruments, Doctor Webb and his associates are beginning to furnish some definite facts about cotton fiber quality to take the place of former impressions and suspicions. As Mr. Barre told you a few minutes ago, this work is giving the breeders and textile scientists a sound basis for their breeding work and their research into the use of cotton.

Armed with facts about the quality of cotton, the cotton research folks attack the fourth major line of research - the study of cotton utilization. The research workers are looking for new uses for cotton. They are also trying to make cotton more satisfactory for its present uses. They are studying the durability and suitability of different types of cotton for different purposes. Bit by bit, they are gathering the basic facts so they can say to the textile mills, "This particular grade of cotton is most suitable for this particular product." To improve in that way the quality of cotton goods, insures the continued popularity of cotton.

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This leads right into the fifth and sixth main lines of cotton research - that is, foreign competition and demand, and the causes of changes in the production, consumption, and price of cotton and cottonseed products. Farmers get the results of these researches largely through our foreign service representatives who are located in various foreign countries. A staff of trained economists is constantly hunting answers to such questions as, "How much land do Brazil and other foreign countries have on which they might raise cotton?" or "What effect will the shift of the textile industry from England to the Orient have on the market for American cotton?" This project also includes a host of other important economic studies such as studies of the things affecting prices and the farmer's income.

Now the seventh line of research includes studies to improve cotton marketing machinery and methods. The present system of paying every farmer in a community the same price for his cotton, regardless of quality - probably has done more than any other one thing to block improvement in quality. This discourages the man who produces a high-quality cotton. The research folks have developed practical standards, bale sampling methods at the gin, and tests as a basis for buying cotton according to quality. To induce cotton buyers actually to buy on the basis of quality is the next big step. The cotton marketing problem also requires careful inquiry into types and efficiency of marketing organization, price margins, and price differences between markets - right on through to the function, operation, and effect of futures trading.

The eighth and last research attack has to do with credit. The farmer must have credit at a reasonable rate. Many farmers now pay 25 to 40 percent interest on loans. The credit research men are seeking the facts basic to improving credit facilities for cotton farmers.

Now, I have outlines for you the Federal-State plan to tackle eight main lines of cotton research. As these research groups find facts that will help the men of the cotton industry solve their problems, we shall report the facts to you.

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